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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,351

08/03/2006

Friedhelm Schmitz

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SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER

DUONG, THO V

ART UNIT

PAPER NUMBER

3744

MAIL DATE

DELIVERY MODE

03/05/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,351	Applicant(s) SCHMITZ, FRIEDHELM	
	Examiner Tho v. Duong	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12, 13, 16-18 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 13, 16-18 and 20-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/9/08 has been entered.

Response to Arguments

Applicant's arguments filed 12/9/08 have been fully considered but they are not persuasive. Applicant's argument that Montgomerie teaches a coating for the entire inner and/or outer surface of the tube, neither montgomerie nor any other prior art teach a second layer arranged on a portion of the inside surface of the tube and that the portion is located remote from an upper most portion and that the portion starts at the tube's three o'clock and end at the tube's nine o'clock position, has been very carefully considered but is not found to be persuasive. Applicant is reminded that the examiner must interpret the limitation as broadly as it reasonably allows. In this case, the portion is the bottom half of the tube, which is covered with the second layer, and the bottom half of the tube is remote from the upper most portion (top portion) of the tube. The bottom half is defined from the tube's three o'clock position to the tube's nine o'clock position.

Applicant further argues that reference to Yazaki's drawing is for illustrative purpose only and fails to disclose that the tube weld seam is located at an upper most position of the tube when the tube is in operation, has been very carefully considered but is not found to be

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persuasive. Applicant is reminded that drawing is also a part of the disclosure and can be used as part of the prior art to disclose or teach of a claimed subject matter. Yazaki discloses (figures 2a-2c) a tube having a weld seam (7) located at an upper most position of the tube so the tube can be made by bending a sheet of material. Furthermore, the tube is capable of conducting a fluid flowing inside the tube regardless of the position of the weld seam on the tube. Therefore, the tube of Yazaki can be used in operation with any orientation or at the orientation shown in figure 2b with the weld seam located at an uppermost position of the tube.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12, 13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Montgomerie et al. (GB 1,042,386). Montgomerie discloses (page 1) a surface condenser for steam comprising a plurality of heat exchanger tubes having an outside surface and an inside surface that rout a cooling medium long the inside surface of the tube, wherein a first layer and a second toxically acting layer of PTFE, which are capable of reducing an adhesion of the fluid, are arranged on the outside and inside surface of the tube respectively. Applicant is reminded that the examiner must interpret the limitation as broadly as it reasonably allows. Therefore, it is reasonably to consider the PTFE layer to read as “toxically acting layer” since PTFE is capable of reducing adhesion of liquid on its surface, which in turn reduces the risk of accumulating or

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growing of organic substances on the surface. At any orientation of the tube in operation, the tube includes an uppermost portion (top portion) and the bottom portion, which is covered by the second layer. The bottom portion is inherently remote from the top portion. Regarding claims 13, Montgomerie discloses (page 1, lines 44-50) that the layer includes a plurality of sub-layers (coatings).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montgomerie in view of Austin et al (US 4,564,537) or Brown et al (CH 286241). Montgomerie substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the inner layer is a silicate network. Both Brown and Austin (column 5, lines 9-69) discloses a layer of silicate network material is coated on a surface of the tube for a purpose of providing anti-fouling coating for the tube surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use either Austin's or Brown teaching in Montgomerie's heat exchanger for a purpose of providing an anti-fouling coating for the tube surface.

Claims 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montgomerie et al. in view of Yazaki (US 3,941,087). Montgomerie substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the tube

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comprises a longitudinal welding seam on upper most of the tube and the portion of the inside surface of the tube starts at the tube's three o'clock position and ends at the tube's nine o'clock position. Yazaki discloses (figure 2) a tube having a longitudinal seam (7) located at the upper most position of the tube cross section for an obvious reason that the tube can be easily formed by bending a flat sheet of material. . It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Yazaki's teaching in the heat exchanger of Montgomerie for a purpose of forming the tube by bending a flat sheet of material. Regarding the limitation that the portion starts at the tube's three o'clock and end at the tube's nine o'clock position. Applicant is reminded that the examiner must interpret the limitation as broadly as it reasonably allows. In this case, the portion is the bottom half of the tube, which is covered with the second layer, and the bottom half is defined from the tube's three o'clock position to the tube's nine o'clock position.

Claims 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montgomerie et al. and Yazaki as applied to claims 17 above, and further in view of Brown et al. (US 5,083,606). Montgomerie and Yazaki substantially disclose all of applicant's claimed invention as discussed above except for the limitation that the heat exchanger system further comprises a heat source, a boiler, and a steam turbine. Brown discloses (figures 2 and 5) a steam power heat exchanger system further comprises of a heat source (113), a boiler, and a steam turbine for a purpose of forming a complete steam power system to drive a generator to generate electricity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Brown's teaching in the combination device of Montgomerie and

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Yazaki for a purpose of forming a complete steam power to drive a generator to generate electricity.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Montgomerie, Yazaki and Brown et al as applied to claim 18 above, and further in view of Austin et al (US 4,564,537) or Brown et al (CH 286241). Montgomerie, Yazaki and Brown substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the inner layer is a silicate network. Both Brown (Ch 286241) and Austin disclose that a layer of silicate network material is coated on a surface of the tube for a purpose of providing anti-fouling coating for the tube surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use either Austin or Brown's teaching in the combination device of Montgomerie, Yazaki, and Brown's 606 for a purpose of providing an anti-fouling coating for the tube surface.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tyler J. Cheryl can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tho v Duong/
Primary Examiner, Art Unit 3744